AS 2806.1—2003
ISO 8685:1992

Australian Standard™

Aluminium ores—Sampling

Part 1: Sampling procedures

Standards Australia

This Australian Standard was prepared by Committee MN-003, Aluminium Ores. It was approved on behalf of the Council of Standards Australia on 6 May 2003 and published on 26 June 2003.

The following are represented on Committee MN-003:

Australian Aluminium Council

Royal Australian Chemical Institute

Additional interests participating in the preparation of this Standard:

Aluminium ore exporters

Aluminium ores industry laboratories

Aluminium ore mining companies

Aluminium ore refineries

CSIRO Minerals

Superintending organization

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Australian Standard™

Aluminium ores—Sampling

Part 1: Sampling procedures

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-003, Aluminium Ores, to supersede AS 2806.1—1994, *Aluminium ores—Sampling*, Part 1: *Sampling procedures.*

The objective of this Standard is to provide the aluminium ores industries with a procedure for obtaining subsamples or gross samples of aluminium ore for sample preparation.

This Standard is identical with and has been reproduced from ISO 8685:1992, *Aluminium ores—Sampling procedures.*

An additional Appendix has been included for Australian purposes which illustrates further examples of mechanical sampling devices to supplement the examples presented in Annex B.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘this International Standard’ should read ‘this Australian Standard’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

(d) Replace the word ‘out’ with ‘cut’ in Clause 3.3.

References to International Standards should be replaced by references to Australian Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
565	Test sieves—Metal wire cloth, perforated metal plate and electroformed sheet—Normal sizes of openings	1152	Specification for test sieves
6138	Aluminium ores—Experimental determination of the heterogeneity of constitution	2806 2806.4	Aluminium ores—Sampling Part 4: Determination of the heterogeneity of constitution
6139	Aluminium ores—Experimental determination of the heterogeneity of distribution of a lot	2806.7	Part 7: Determination of quality variation
6140	Aluminium ores—Preparation of samples	2806.3	Part 3: Preparation of samples
9033	Aluminium ores—Determination of the moisture content of bulk material	2932 2932.2	Aluminium ores—Chemical analysis Part 2: Determination of the moisture content of bulk material
10226	Aluminium ores—Experimental methods for checking the bias of sampling	2806 2806.6	Aluminium ores—Sampling Part 6: Methods for checking the bias of sampling
10277	Aluminium ores—Experimental methods for checking the precision of sampling	2806.5	Part 5: Methods for checking the precision of sampling

Readers of this Standard are also advised to refer to AS 4433.1, *Guide to the sampling of particulate materials*, Part 1: *Sampling procedures.*

The term ‘informative’ has been used in this Standard to define the application of the annex or appendix to which it applies. An ‘informative’ annex or appendix is only for information and guidance.

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AUSTRALIAN STANDARD

Aluminium ores—Sampling

Part 1:
Sampling procedures

1 Scope

This International Standard sets out requirements for the sampling of aluminium ores from moving streams and stationary situations, including stopped-belt sampling, to provide gross samples for sample preparation. Stopped-belt sampling is the reference method for collecting ore samples against which other sampling procedures may be compared. Sampling from moving streams is the preferred method. Sampling from stationary situations should only be considered when sampling from moving streams is not possible. The procedures described in this International Standard for sampling from stationary situations merely minimize some of the sampling errors.

Although this International Standard is intended to cover all aluminium ore sampling from moving streams, the procedures recommended may not be applicable in cases of extreme segregation, for example very wet ore due to its sticky nature, or very dry ore due to generation of dust. In such cases it may be necessary to revert to stopped-belt sampling.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 565:1990, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings.*

ISO 3534:1977, *Statistics — Vocabulary and symbols.*

ISO 6138:1991, *Aluminium ores — Experimental determination of the heterogeneity of constitution.*

ISO 6139:—[1], *Aluminium ores — Experimental determination of the heterogeneity of distribution of a lot.*

ISO 6140:1991, *Aluminium ores — Preparation of samples.*

ISO 9033:1989, *Aluminium ores — Determination of the moisture content of bulk material.*

ISO 10226:1991, *Aluminium ores — Experimental methods for checking the bias of sampling.*

ISO 10277:—[1], *Aluminium ores — Experimental methods for checking the precision of sampling.*

3 Definitions

For the purposes this International Standard, the definitions given in ISO 3534 (including the terms "precision" and "accuracy") and the following, apply.

3.1 bias: The tendency to obtain a value which is persistently higher or persistently lower than the true value. Alternatively, the difference between the true value and the average result obtained from a large number of determinations using a biased method.

3.2 constant mass division: The method of sample division in which the retained portion from individual increments is of uniform mass.

3.3 out: A single pass of the sampling device through the ore stream.

3.4 divided increment: The quantity of ore obtained by division of the increment in order to decrease its mass.

1) To be published.